

Amendments to the Specification:

Please replace the paragraph beginning on page 2, line 30, of the specification, with the following amended paragraph:

A further measure for increasing the stability and for reducing notch effects consists according to the invention in that all geometrically created form transitions of the ceramic part of the working member have at least radii of 0.01 mm to 5 mm. Preferably, the radii are such that they do not fall below 0.5 mm. This avoids all sharp-edged transitions, e.g. in the case of changes in diameter, during provision of chip flutes, or the like. The indicated radii may also refer to the blank (green compact) of the instruments of the invention, from which the finished instrument is then sintered or burnt. It will be understood by those with ordinary skill in the art that the reference to geometrically created form transitions refers to any line on the ceramic part formed by the intersection of two surfaces at an angle of other than 180°.

Please replace the paragraph beginning on page 3, line 6, of the specification, with the following amended paragraph:

A further measure for enhancing the stability of the inventive instruments, which are operated at very high speeds as is e.g. standard in dental drills or the like, consists in providing a core reinforcement which comprises that part of the ceramic portion of the working member that the underlies and is not penetrated by the grooves or cuts in the ceramic portion of the working member. This is created by reducing the depth of grooves or cuts from the free end of the working member to the opposite area of the working member adjoining the shaft. This core reinforcement which thus forms an imaginary ~~spherical~~ conical basic shape may e.g. increase at an angle of 0.25° to 3° towards the shaft. A preferred value is in the range of 1°. The conical configuration and the related tapering of the instrument are shown in FIGs. 4 and 5 of the drawings.

Please replace the paragraph beginning on page 3, line 14, of the specification, with the following amended paragraph:

To avoid the occurrence of microcracks, or the like, a microhardening of the structure of the surface of the ceramic part of the working member is intended. The bending strength of the instruments according to the invention can considerably be increased thereby. The microhardening process can be carried out by blasting the surface (by using particles). As will be understood by those of ordinary skill in the art, the microhardness of a surface is a measure of the hardness of the surface as determined by a Vickers or Knoop tester as set forth, for example, in ASTM E-384 and the microhardening of a surface increases the hardness, as measured by a Vickers or Knoop tester. Additionally, increasing the microhardness of the surface of the ceramic portion of the working member will increase its bending strength.

Please insert the following new paragraphs at line 21, page 8, of the specification:

As indicated above, a means of increasing the stability and reducing notch effects involves providing radii of 0.01 mm to 5 mm, and preferably not less than 0.5 mm, at all geometrically created form transitions of the ceramic part of the working member so as to avoid all sharp-edge transitions such as changes in diameter

during the provision of chip flutes or the like. The reference to geometrically created form transitions refers to any line on the ceramic part, other than a cutting edge, that is formed by the intersection of two surfaces at an angle of other than 180° . The foregoing radii may also be applied to the blank (green compact) of the instruments of the invention from which the finished instrument is then sintered or burnt.

Also as indicated above, a further measure for enhancing the stability of the instruments of the invention comprises providing a core reinforcement, the core of the instrument comprising that part of the ceramic portion of the working member that underlies and is not penetrated by the grooves or cuts in the ceramic portion of the working member. The core reinforcement is created by reducing the depth of grooves or cuts from the free end of the working member to the opposite end of the working member adjacent the shaft of the working member. The core reinforcement may increase at an angle of 0.25° to 3° , preferably in the range of 1° , toward the shaft from the free end of the working member.

The occurrence of microcracks and the like can be avoided by microhardening the structure of the surface of the ceramic portion of the working member. The bending strength of the instruments of the invention can be increased as a result. The microhardening process can be carried out by blasting the surface of the ceramic portion of the working member using particles for example. As will be understood by those of ordinary skill in the art, the microhardness of a surface is a measure of the hardness of the surface as determined by a Vickers or Knoop tester as set forth, for example, in ASTM E-384. And the microhardening of a surface increases the hardness of the surface as measured by a Vickers or Knoop tester. Also, increasing the microhardness of the surface of the ceramic portion of the working member can increase its bending strength.